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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,211	02/15/2007	Lawrence David McCarthy	B-6038PCT 623567-9	2675

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LADAS & PARRY  
5670 WILSHIRE BOULEVARD, SUITE 2100  
LOS ANGELES, CA 90036-5679

EXAMINER
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WANG, CLAIRE X

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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08/03/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,211	<b>Applicant(s)</b> MCCARTHY ET AL.	
	<b>Examiner</b> CLAIRE WANG	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8, 11-12, 14, 17-19, 22-25, 28-30, and 34-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 11, 17, 22-24, 28, and 34-35 is/are rejected.
- 7) ☒ Claim(s) 8, 12, 14, 18, 19, 25, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/16/2007</u> .                                              | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Objections***

1. Claim 3 is objected to because of the following informalities:
  - a. In line 8 of claim 3, the word “images” should be changed to “image”.  
Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 34 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. As to claim 34, it is rejected because it is dependent upon canceled claim 33, thus making it indefinite.
- b. As to claim 35, it is rejected because it is dependent upon rejected claim 34.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3, 6, 8, 11-12, 14, 17-19 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit decisions<sup>2</sup> indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claims recite a series of steps or acts to be performed, the claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, claim 1 teaches the steps of tonal manipulation of two images then forming a security image from the manipulated tonal values; these steps are not performed on a machine and thus claim 1 is not tied to another statutory class. Further, claim 1 does not transform data from one form to another, thus, it also does not meet the requirements of transformation. As to claims 2-3, 6, 8, 11-12, 14, 17-19, they are rejected because they are depended upon rejected claim 1.

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<sup>1</sup> *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

<sup>2</sup> *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 6, 11, 17, 22-24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by A cautionary note on image downgrading by Charles Kurak and John McHugh (1992 computer-security application conference, San Antonio, TX 1992; hereinafter “Kurak”).

As to claim 1, Kurak teaches a method of forming a security image from two or more images (*encode images within images; Section 3.1, paragraph 1, lines 1-2*) comprising: manipulating tonal values of each image element of a first image to take values within a first set of tonal values (*Kurak teaches in a computer an image is an array of numbers that represent light intensities at various points in the image (Section 3, paragraph 1, lines 2-4), Examiner reads the light intensities as tonal values. Further, Kurak teaches encoding images within images by replacing the low order bits of one image with the high order bits of another (Section 3.1, paragraph 1, lines 1-3), the low image bits of a first image are eliminated and thus the tonal values of the whole image has been changed*); manipulating tonal values of each image element of a second image to take values within a second set of tonal values (*encoding images within images by replacing the low order bits of one image with the high order bits of another*

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*(Section 3.1, paragraph 1, lines 1-3), the low image bits of a second image are eliminated and thus the tonal values of the whole image has been changed); and forming a security image from the manipulated tonal values of the first and second images (encoding images within images by replacing the low order bits of one image with the high order bits of another (Section 3.1, paragraph 1, lines 1-3)), the first and second sets of tonal values being selected so that at least one of the first and second images is concealed in the security image (Figure 4 shows Figure 3 being encoded with Figure 5).*

As to claim 2, Kurak teaches selecting the first image to be a visible image (Figure 3 will be encoded with Figure 5, thus, it is the visible image) and selecting the second image to be an encoded image which can be decoded using a decoding screen so that the encoded image is the image concealed in the security image (Figure 5 is the concealed image because it is encoded within Figure 3; See Figure 4).

As to claim 3, Kurak teaches manipulating tonal values of each image element of at least one additional image to take values within an additional set of tonal values (total of three images have been used; *Section 3.1, paragraph 1, lines 8-9*); and forming the security image from the manipulated tonal values of the first, second and at least one additional image (Fig. 3 is encoded with Fig. 2, wherein Fig. 2 is the third image to be encoded).

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As to claim 6, Kurak teaches wherein the encoded image is selected to be a digitally modulated image (all images are 256 by 256 by 8 bit per pixel; *Section 3.1, paragraph 1, lines 7-8*).

As to claim 11, Kurak teaches wherein the number of tones in the first and second sets is equal to the number of available tones for the image representation technique (all images are 256 by 256 by 8 bit per pixel; *Section 3.1, paragraph 1, lines 7-8*).

As to claim 17, Kurak teaches concealing a plurality of images within the security image in such a manner that they can each be decoded by a processing means (Fig. 6 is extracted from Fig. 4 after Fig. 5 was encoded into Fig. 3).

As to claims 22-24 and 28, they are the device claim of claims 1, 2, 6, and 11. Kurak teaches a computer performing the image manipulations (*Section 3, paragraph 1, lines 2-4*).



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***Allowable Subject Matter***

7. Claims 8, 12, 14, 18, 19, 25, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome and 35 U.S.C. 101 rejections.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE WANG whose telephone number is (571)270-1051. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on 571-272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Claire Wang/  
Examiner, Art Unit 2624  
07/29/2010